REMARKS

Reconsideration of the application identified in caption in light of the remarks which follow is respectfully requested.

In the Official Action, claims 29-35, 37, 39-41, 43-52 and 55-57 stand rejected under 35 U.S.C. §103(a) as being obvious over International Publication No. WO 03/029350 (*WO '350*). The Examiner has relied on U.S. Patent No. 7,323,241 (*Myard et al*) as being an equivalent of *WO '350*. Withdrawal of this rejection is respectfully requested for at least the following reasons.

Independent claim 29 recites a precursor article of a composite material comprising a polymeric matrix and at least one reinforcing yarn and/or fibers, said precursor article comprising at least one reinforcing yarn and/or fibers and at least one polymeric-matrix yarn and/or fibers. Said polymeric-matrix yarn and/or fibers are made of a thermoplastic polymer. Said thermoplastic polymer of said reinforcing yarn and/or fibers and/or of said polymeric-matrix yarn and/or fibers comprises at least one polycondensate consisting of: 30 to 100 mol%, limits inclusive, of macromolecular chains satisfying the formula (I), 0 to 70 mol%, limits inclusive, of macromolecular chains satisfying the formula (II).

In the Final Official Action at page 4, the Examiner has alleged that *Myard et al* discloses the use of monomers (IIa) and (IIb), and a blending with a molten polymer during an extrusion operation. The Examiner has taken the position that such disclosures establish that the resulting percursor polymer of *Myard et al* has an identical structure to the claimed macromolecular chains satisfying the formula (I). In the Response to Arguments at page 12 of the Final Official Action, the Examiner has reiterated such rationale concerning the *Myard et al* percursor polymer. Applicants

respectfully but strenuously disagree with such assertions for at least the following reasons.

As noted above, the Examiner has relied on *Myard et al*'s disclosure of the use of monomers (IIa) and (IIb), in combination with blending with a molten polymer during an extrusion operation. However, *Myard et al* teaches employing the blending with a molten polymer during an extrusion operation when the **monomer (I)** is used, not monomers (IIa) and (IIb). See col. 4, lines 66-67. The Patent Office has provided no explanation as to why it would have been obvious to modify *Myard et al* by employing monomers (IIa) and (IIb) in combination with blending with a molten polymer during an extrusion operation, which *Myard et al* teaches is for use with monomer (I).

Furthermore, the Patent Office has not established **with the requisite certainty**, that the use of monomers (IIa) and (IIb), in combination with blending with a molten polymer during an extrusion operation, inherently results in a structure that is identical to the claimed macromolecular chains satisfying the formula (I).

The Patent Office's burden of proof for properly alleging an inherent disclosure is well established. "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (emphasis added). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent feature necessarily flows from the teachings of the applied prior art." *Ex Parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

In the present case, the Patent Office has asserted that the use of monomers (IIa) and (IIb), in combination with blending with a molten polymer during an extrusion operation, results in a structure that is identical to the claimed macromolecular chains satisfying the formula (I). The Patent Office has alleged that monomers (IIa) and (IIb) correspond to exemplary monomers set forth in Applicants' disclosure. However, the Patent Office has not explained why the use of such monomers in blending with a molten polymer during an extrusion operation, would have **necessarily** resulted in the claimed macromolecular chains satisfying the formula (I). For example, there is no indication as to why the structures $(X\text{-}R_2\text{-}Y)_n$ and $(Y\text{-}R_2\text{-}X)_m$ of formula (I), wherein each of n and m represent a number between 30 and 200, are necessarily present in the resulting precursor polymer. Simply put, even if monomers (IIa) and (IIb) of *Myard et al* would have been employed in the manner suggested by the Patent Office, this is not sufficient to establish with the requisite certainty that the resulting precursor polymer is identical to the claimed macromolecular chains satisfying the formula (I).

In light of the above, it is apparent that the Patent Office has failed to meet its burden of proof for establishing inherency with the requisite certainty. Accordingly, for at least the above reasons, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Claims 29-52 and 57 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 3,893,981 (*Thoma et al*). Withdrawal of this rejection is respectfully requested for at least the following reasons.

At pages 5-6 of the Final Official Action, the Patent Office has relied on *Thoma et al* for disclosing the structural units disclosed at column 4, lines 32-60 thereof. However, none of such structural units correspond to the claimed macromolecular chains satisfying the formula (I). For example, None of such structural units of *Thoma*

et al contain structure which corresponds to $(X\text{-}R_2\text{-}Y)_n$ and $(Y\text{-}R_2\text{-}X)_m$ in formula (I), wherein each of n and m represent a number between 30 and 200. Nor would it have been obvious to modify *Thoma et al* to arrive at such claimed structure. "[I]t remains necessary to identify some reason that would have led a chemist to modify a known compound in a particular manner to establish prima facie obviousness of a new claimed compound." *Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350 (Fed. Cir. 2007). Here, the Patent Office has not provided adequate rationale as to why the ordinarily skilled artisan would have modified *Thoma et al* to arrive at the claimed macromolecular chains satisfying the formula (I).

Accordingly, for at least the above reasons, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Claims 29-35, 37, 39-41 and 43-52 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 7,323,241. For the reasons previously explained herein with respect to the §103(a) rejection on the basis of the disclosure of *Myard et al*, of which claims 1-23 of *Myard et al* are a part thereof, independent claim 29 is patentably distinguishable over the disclosure of *Myard et al*, and is distinguishable over the claims thereof for at least the same reasons previously noted herein.

Accordingly, for at least the above reasons, reconsideration and withdrawal of the rejection is respectfully requested.

Claims 29-52 stand provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 22-42 of copending Application No. 10/565,870 on the grounds set forth on page 11 of the Official Action. Withdrawal of this rejection is respectfully requested for at least the following reasons.

The analysis employed in an obviousness-type double patenting determination parallels the guidelines for establishing a rejection under 35 U.S.C. §103(a). Thus, the factual inquiries set forth in the *Graham v. John Deere* decision must also be followed and applied. Thus, any obviousness-type double patenting rejection should make clear: "[A] the differences between the inventions defined by the conflicting claims;" and "[B] the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue is anticipated by or would have been an obvious variation of the invention defined in a claim of the [copending application]." M.P.E.P. §804.

The grounds for rejection clearly fall far short of making these two principle requirements clear. The grounds for rejection clearly fail to establish a *prima facie* case of obviousness-type double patenting.

In addition, it is noted that claim 29 is directed to a precursor article of a composite material comprising reinforcing yarn and/or fibers made at least in part of a reinforcing material, as well as polymeric-matrix yarn and/or fibers made of a thermoplastic polymer comprising at least one polycondensate material. The grounds for rejection do not even acknowledge these requirements of claim 29, much less contain any explanation of how the subject matter set forth in the claims of the above-identified copending application disclose or render obvious these aspects of the article recited in claim 29. Thus, the grounds for rejection are improper for at least this additional reason. Reconsideration and withdrawal of the rejection is respectfully requested.

The dependent claims are allowable at least by virtue of their direct or indirect dependence from independent claim 29. Thus, a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.20(d) and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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